

CLASSIFIED MESSAGE

S E C R E T

DATE 30 AUG 62 2325Z  
25X1TO :   
FROM :   
ACTION: OSA (1-2-3-4-5-6-7-8-9-10)  
INFO : S/C (11)

25X1 TOR: 30 AUG 62 0032Z

TO PRITY

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NO NITE ACTION

INFO

CITE

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IN 47179

ROUTING

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3	/	6	CD

ROUTINE

RB

ZE19 I

R09

25X1

25X1 1.  DISTRIBUTION THIS MESSAGE LIMITED TO THOSE WITH ABSOLUTE NEED TO KNOW.

2. CHECKOUT RUN ON 203 COMPLETED 29 AUGUST AFTER CONSIDERABLE DELAY CAUSED BY A FAULTY TACHOMETER AND ENGINE NOZZLE INSTABILITY.

3. ON FIRST RUNS A SPEED REDUCTION OF APPROXIMATELY 500 R.P.M. AT MILITARY AND 300 R.P.M. AT BLEED OPENING WAS OBSERVED. THIS COINCIDED WITH SPEEDS EXPECTED OF A FAILED TT2 SENSOR. SEVERAL CHECKS OF THIS CIRCUIT WERE INCONCLUSIVE SO SPEED INSTRUMENTS BECAME SUSPECT. CALIBRATION OF TACHOMETER DISCLOSED ERROR. SUBSTITUTED VEHICLE TECH. GENERATOR AND INDICATOR.

4. NOZZLE INSTABILITY WAS FIRST THOUGHT TO BE RESULT OF FUEL CONTAMINATION WHEN FILTER SCREENS REVEALED WIRE FROM A NEWLY FABRICATED FLEX METAL INLET LINE ON MAIN SYSTEM. WIRE WAS SIMILAR TO BRAID ON PIPE O.D. AND APPARENTLY HAD LODGED IN INTERNAL BELLOW

GROUP 1

EXCLUDED FROM AUTOMATIC

DOWNGRADING AND

DECLASSIFICATION

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CONVOLUTIONS AND COULD NOT BE FLUSHED OUT BY NORMAL FLUSHING PROCEDURES. INSTALLED RUBBER LINES FROM FLOW BENCH ON BOTH MAIN AND A/B INLETS. NEW RUBBER LINES BEING MADE. SUBSEQUENT INSPECTIONS OF PRESSURE REGULATING VALVE AND HYDRAULIC PUMP INTERNAL PARTS SHOWED NO EVIDENCE OF CONTAMINATION. WE DID FIND ONE SPRING ON THE PUMP CONTROLLER VALVE SEAL MASHED FROM IMPROPER ASSEMBLY BUT IT DID NOT APPEAR TO BE SERIOUS ENOUGH TO CAUSE PUMP MALFUNCTION. NO IMPROVEMENT IN ENGINE STABILITY EFFECTED. SEVERAL RUNS WITH HYDRAULIC FILTERS REMOVED, FUEL RETURN LINES CAPPED, E.N.L. VALVE OUT, ETC FAILED TO CURE SEVERE INSTABILITY AT MILITARY SPEED RANGE. THIS WAS APPROXIMATELY 2 CYCLES PER SECOND AND 2 INCHES AMPLITUDE ON ACTUATOR RODS.

5. RAN MANUAL E.N.C. WITH VALVE MOUNTED ON CONTROL. STABLE. AT HSD REPS SUGGESTION, RAN WITH PT<sub>2</sub> SENSE TO MAIN CONTROL AT 20 PSIA. STABLE EVERYWHERE EXCEPT IN DECEL FROM MILITARY SPEED BUT THIS CORRECTED ITSELF IN 3 TO 4 SECONDS. THIS ALSO CURED OCCASSIONAL INSTABILITY AT IDLE AFTER START. PREVIOUSLY THIS WAS STOPPED BY SLIGHT THROTTLE MOVEMENT ABOVE IDLE AND RETURN TO IDLE.

6. HSD RECOMMENDED ONE HALF TURN CLOCKWISE OF PT<sub>2</sub> RATE ADJUSTMENT SCREW. HIGH SPEED NOZZLE FLUTTER ELIMINATED AT ALL CONDITIONS. A VERY SLOW NOZZLE OSCILLATION OF LESS THAN 2 INCHES OF MERCURY PT<sub>5</sub> PRESSURE AND 8 TO 10 CYCLES PER MINUTE REPEAT MINUTE OCCURRED AT MILITARY POWER ONLY AND ONLY AFTER ACCEL TO THIS POINT. IT DIED

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OUT IN APPROXIMATELY TWENTY SECONDS. WHILE HOLDING MILITARY POWER THIS SLOW PT<sub>5</sub> OSCILLATION OCCASSIONALLY REOCCURRED BUT AT A MUCH LOWER AMPLITUDE AND LASTED ONLY A FEW SECONDS. ALL OPERATIONS FROM IDLE TO MAX. A/B WAS GOOD EXCEPT AE JUST STATED. ACCEL CHECKS WERE MADE TO EVALUATE OVER AND UNDER SHOOT EFFECTS OF PT<sub>2</sub> RATE ADJUSTMENT. THE VEHICLE TACH. IS DAMPED TOO MUCH TO CHECK THIS BUT OBSERVATION OF NOZZLE AND PT<sub>5</sub> GAGE DID NOT INDICATE ANY SIGNIFICA CHANGE. WILL REPEAT IN VEHICLE WITH SPEED TRACES.

7. A/B LITE POINT RERIGGED FOR 10 DEGREE FLAT AT MILITARY. ENGINE IN PROCESS OF DELIVERY TO VEHICLE.

8. 203 TRIM IS SLIGHT HIGHER THAN AS CHECKED IN [REDACTED] 25X1  
SINCE WE MADE TWO CALIBRATIONS HERE AT DIFFERENT TT<sub>2</sub> CONDITIONS LOCK-  
HEED REQUESTED WE LEAVE UNTIL INSTALLED CALIBRATION COMPLETED, THEN  
TRIM DOWN. WE APPARENTLY LOST SOME TT<sub>4</sub> THERMOCOUPLES ON THE AVERAGIN  
CIRCUIT. THE INDIVIDUALS AGREED WITH THE ORIGINAL PERFORMANCE.  
ONLY FOUR SPARE THERMOCOUPLES AVAILABLE. [REDACTED] TO EXPEDITE 25X1  
5 PROBES PLUS THREE OR FOUR SETS.

9. THE CIS DUMP SOLENOID WAS REPLACED. FAILED UNIT WILL BE HAND  
25X1 CARRIED BY [REDACTED] AS GENERAL POLICY ALL SERVICE INVESTIGATION  
25X1 ITEMS WILL BE RETURNED TO [REDACTED]

10. ESTIMATE FIRST GROUND RUN ON 4 SEPTEMBER. STARTER SITUATION  
NOT TOO GOOD.

11. HSD CART ON LAST RUN WAS WAY DOWN ON OUTPUT AS EVIDENCED BY  
LOW TORQUE GAGE READINGS AND VERY SLOW START. FOUND HYDRAULIC OIL

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SUPPLY ONE QUART LOW AND 3 SPARK PLUG LEADS LOOSE. UNABLE TO CHECK STARTER OUTPUT UNTIL 203 INSTALLED IN VEHICLE.

12. TWO OF THREE AIR SUPPLY CARTS FOR AIRESEARCH STARTERS ARE INOPERATIVE. WE DO HAVE MA<sub>2</sub> CARTS AND CAN USE THREE STARTERS WITH ONE 105 AND TWO MA<sub>2</sub> CARTS AIR FORCE WORKING ON REPAIR OR RE-PLACEMENT OF 105 CARTS.

13. ADDITIONAL HSD CARTS WILL BE NEEDED TO COVER TEST STAND IF AIRESEARCH STARTERS ARE USED ON FLIGHT LINE.

14. HYDRAULIC PUMP PARTS AND DRAWINGS ARRIVED 30 AUGUST SHUTTLE.

25X1 15. NOTE TO [ ] IT WOULD SIMPLIFY OPERATIONS HERE IF COVER TUBE FOR REDUCTION GEAR BOX DRIVE AND GEARBOX WERE INSTALLED. LEAVE OUT SHAFT AND OIL LINES SO BOX DOES NOT RUN. WE HAVE TO REMOVE OIL LINE TO INSTALL COVER TUBE AFTER RUNNING WHICH INVALIDATES LEAK CHECK ON THIS ASSEMBLY. OPERATION IS ALSO MESSY. AS ALTERNATIVE, PLACE COVER TUBE IN POSITION WITH SHIPPING BRACKETS AND LEAVE GEARBOX, SHAFT, ETC., OFF.

16. ENGINE TOTAL TEST STAND TIME AT [ ] 04:21

4-21

25X1

A/B TOTAL TEST STAND TIME AT [ ] 00:03.

25X1

END OF MSG